ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract **Element Code:** AFCDA01010
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Elops affinis*
COMMON NAME: Pacific Tenpounder, Machete
SYNONYMS:
FAMILY: Elopidae

AUTHOR, PLACE OF PUBLICATION: Regan, 1909.

TYPE LOCALITY:

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: There is a single genus in the family Elopidae (tenpounders), composed of about 5 species (Nelson 1974). Whitehead (1962) presents a key to six species he recognized at the time. Others have speculated that only a single species exists. Forey (1973) presents a detailed account of the extant species. The Pacific tenpounder or machete is primarily a marine form that moves into brackish or fresh water.

DESCRIPTION: The family is typified as having rounded bodies, terminal mouths, large pseudobranchiae, branchiostegal rays 27-35, dorsal fin rays usually 20-25 (last ray not elongate), anal fin rays usually 13-19, pelvic rays usually 12-16, conus arteriosus absent, lateral line tubes unbranched, lateral line scales usually 95-120, pelvic fins inserted beneath or posterior to the origin of the dorsal fin, and vertebrae 63-79.

"Body elongated, covered with small, silvery, cycloid, caducous scales. Dorsal and anal fins depressible into a sheath of scales along bases. Auxiliary and inguinal processes pronounced. Dorsal fin with 20 rays. Anal fin-rays 13. Pseudobranchiae large and exposed. Lateral line straight. Gular plate elongated, 3 or 4 times as long as broad. Color silvery over-all, with some yellowish pigment in eyes and at bases of paired fins" (Minckley 1973). Machete may achieve lengths of nearly 1.0 m (39.4 in.) at sea, but specimens caught from the Colorado River have usually been less than 40.0 cm (15.7 in.).

AIDS TO IDENTIFICATION: Silvery color, with an elongated body. The scales are small and cycloid and the lateral line is straight. Dorsal and anal fins may be depressed into a sheath of scales at their bases. Fin rays are 20 dorsal and 13 anal. Only found in the Colorado River in Arizona, usually following a flood event that connected the river to the Gulf of California.

ILLUSTRATIONS: B&W photo (Minckley 1973:46)
Line drawing (Nelson 1984:97)
Line drawing (Nelson 1994:99)
Color photo (Rinne and Minckley 1991:37)

TOTAL RANGE: Distribution in the Eastern Pacific, Peru to northern Ventura Co., California. The species is common in the Colorado River delta in the Gulf of California. Machete were reported as common in the Salton Sea in California at one time, but have declined since (Minckley 1973).

RANGE WITHIN ARIZONA: The occurrence of the species has been sporadic in the Lower Colorado River (Minckley 1973), possibly following flood events that connect the River to the Gulf. Upstream movement is limited by dewatering in Mexico and mainstem dams in Mexico and Arizona. May be found in the Yuma area.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Species is pelagic, oceanodromous/marine and brackish to fresh preferring depths of 0-8 m (0-26.25 ft). Little is known of the biology or ecology of the species in fresh water. It is predacious, probably similar in habits to the related ladyfish *(Elops saurus*) in the Atlantic. Individuals or schools may move into fresh water to forage. Maximum size is almost 1m (3.28 ft) and 4.5 kg (9.9 lb) in the sea. Individuals over 36 cm 14.17 in) are rare in the Colorado River.

Larval and juvenile Machete are not uncommon, seasonally, near Puerto Penasco, Sonora, Mexico, in tidal inlets. Spawning areas are unknown, but are likely marine with transparent larvae migrating towards coastal areas. Young feed and grow in fresh and brackish coastal waters (Minckley 1973).

REPRODUCTION: Broadcast planktonic eggs well offshore in the open sea. Near transparent leptocephalus larvae, similar to eels but can be distinguished by a forked tail (Minckley 1973).

FOOD HABITS: Young may feed on crustaceans in brackish or fresh coastal waters. This behavior may partially explain excursions of young or subadult fish into the lower Colorado River during flood conditions. Subadults and adults are predacious, piscivores (Minckley 1973).

HABITAT: Little is known of the habitat requirements of the species. Primarily a marine form, it also penetrates lagoons and estuaries and displays catadromy in some rivers.

ELEVATION:

PLANT COMMUNITY:

POPULATION TRENDS: Rare in the Lower Colorado River, found following periods of high flow that may connect the river to the Gulf of California. Absent during extended periods when the Colorado and Gulf do not connect. Last observed in state around 1984.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:
STATE STATUS:
OTHER STATUS:

MANAGEMENT FACTORS: Management concerns include a lack of adequate flows of good quality water to the sea; over abundance of exotic species; presence of barriers to movement.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: The life history and habitat requirements/preferences in Arizona are virtually unknown. Any project that would address habitat preferences, foraging behavior and food habits would increase our understanding of the species considerably.

LAND MANAGEMENT/OWNERSHIP: Federal and State land in Arizona.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

Revised: 1994-07-29 (LMR)
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